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Best Practices and Web Practices: Comparing Corporate Supplier Diversity Programs with Web-based Minority Supplier Content

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ABSTRACT

The growing use of the Web for business-to-business transactions means corporate Web sites could be used to communicate with diverse suppliers. This study compares the Web-based supplier diversity content on Fortune 500 public sites with the content of off-line minority supplier programs. Web sites are underused for communicating with diverse suppliers, as the content appears on only 12.5% of the sites. They emphasize information publishing because the most common Web-based supplier diversity items are contact information, such as a title and name, and third-party certification. Web-based supplier diversity content, however, is very similar to off-line diversity program content.

INTRODUCTION

The Web is a channel for business-to-business (B2B) commerce that may soon exceed \$1 trillion in the U.S. (Berkowitz, 2003). Researchers have studied the factors that affect the performance of electronic supply chains (Cucchella, et al., 2002), and the behavior of participants in electronic markets (Lo and Hsieh, 2003). Diffusion of Internet technology can improve business performance (Koh and Chong, 2002). Although there are significant savings associated with electronic procurement (Crockett, 2002), most e-commerce investments have been in customer-facing systems, rather than procurement and supplier systems (META Group, 2000). Given the current level of growth in B2B e-commerce, Web-based supplier communications should be studied. Web-based B2B commerce directly affects IT personnel who develop and maintain corporate Web sites as they must interact with a variety of constituencies and understand technical matters, business strategy, and social issues when they develop content for corporate Web sites.

This study compares Web-based minority supplier content with off-line supplier diversity programs. Diverse suppliers are small or disadvantaged firms headed by minorities, women, or disabled veterans. Using the Web to communicate with minority-owned firms is appropriate because the racial and gender mix of Web users in the U.S. is similar to the race/gender composition of the population (Thompson, 2000a, 2000b). By purchasing from diverse suppliers, corporations make their supplier base as diverse as their different customers (Armstrong, 2004; Reese, 2001). Supplier diversity is a component of supply chain activity and corporate diversity programs (Wentling and Palma-Rivas, 2000). Those supply chains are increasingly being supported by information technology (Angeles and Nath, 2003), which therefore demands the attention of information systems personnel who deal with EDI, virtual private networks, Web services, and related technologies that are required to accomplish electronic trading partner links.

Why Examine Supplier Diversity?

The minority segment of the U.S. population, and its buying power, is growing (Reese, 2001). Most of the U.S. labor force growth is in minorities (Milken, 2000). Growth in firms owned by women is twice the rate of growth for all U.S. businesses (Fields, 2001). The number of minority-owned firms is growing faster than non-minority firms and sales per employee grow more quickly at minority firms than at the Fortune 500 (Milken, 2000). African Americans are 50% more likely, and Latinos 20% more likely, to start a business than whites (Daniels, 2004).

Half of the U.S.'s largest minority-owned firms have a Web site (Hernandez, 2002). Supplier diversity programs enable large firms to buy from a rapidly growing segment of the population, and partnering with minority-owned firms is one way to learn about minority consumers (Daniels, 2004; Reese, 2001). More than half of all Fortune 500 corporations have some form of a minority purchasing program for linking with minority suppliers (procurementresources.com), and these programs "increase shareholder value" (Armstrong, 2004). Organizations as

diverse as the American Red Cross have initiated supplier diversity programs as a key element of their strategic plan (Evans, 2004).

Minority firms are 14.6% of U.S. firms; minorities are 27% of the U.S. population (MBDA, 2001). However, minority firms only receive 3.5% of corporate purchasing (Hernandez, 2002; Reese, 2001), which in 2003 amounted to over \$70 billion, according to the National Minority Supplier Development Council (Daniels, 2004). Women-owned firms receive 3% of Fortune 500 purchases (div2000.com), and 2.5% of Pentagon contracts (Fields, 2001).

Minority businesses are described by the acronym "MWBE" - - minority and women-owned business enterprises. Disabled veterans and small or disadvantaged businesses are also MWBEs. An MWBE is a minority and/or women-owned business enterprise that is at least 51% owned, controlled, and operated by men and women who are African Americans, Hispanic Americans, Asian Americans, Native Americans, or Non-minority women (<http://www.sba.gov/8abd/indexfaq.html>). African Americans make up 66% of MWBEs, Asian American 21%, Hispanics 11%, and American Indians 2% (Davis, 2004).

Firms don't allow MWBE self-certification - - suppliers must prove certification through a certifying agency. MWBEs certify through the National Minority Supplier Development Council (www.nmsdcus.org), the Women's Business Enterprise National Council (www.wbenc.org), or the Small Business Administration (www.sba.gov/sdb/). NMSDC certification includes screening, interviews, capability studies, and site visits. WBENC services include certification, assistance with business plans, obtaining capital, and marketing. The SBA certification process is extensive; it requires business licenses, articles of incorporation, financial statements, a current employee roster and employment records, and a birth certificate or certificate of naturalization for key employees (e.g., owner, board members).

Other Web resources for MWBEs are the U.S. Department of Commerce Minority Business Development Agency (www.mbda.gov), the U.S. Chamber of Commerce (www.uschamber.com/), and the U.S. Hispanic Chamber of Commerce (www.usbcc.com). Div200.com lists MWBEs and supplier contacts in the Fortune 1000. The National Association of Women Business Owners (www.nawbo.org) provides networking opportunities, education, and public policy presentations. Given that a large number of minority firms are already on the Web (Hernandez, 2002), and the significant Web-based resources for minority firms identified in this section of the paper, it is clear that information systems personnel must be fluent on minority supplier issues because of the strategic importance of business-to-business systems development projects.

Purpose of the Study

This research visits Fortune 500 public Web sites to examine Web-based communication with diverse suppliers. The following sections review related studies and identify MWBE program content, list Web-based MWBE content, and compare the off-line and Web-based programs. The objectives of the study reported in this paper are to categorize supplier diversity content on corporate public Web sites, and compare that content with off-line MWBE programs. This paper is distinctive because it examines the largely unstudied topic of supplier diversity content on corporate Web sites.

LITERATURE REVIEW: CORPORATE WEB SITES AND SUPPLIER DIVERSITY

Studies have cataloged the content of corporate Web sites. Young and Benamati (2000) found that Fortune 500 Web sites contain: product and financial transactions, customer service, communication (e.g., e-mail), and publishing; over a third had supplier content. Liu, Arnett, Capella and Beatty (1997) found that a quarter of the Fortune 500 conducted business through a public Web site. Fortune 500 Web sites are used for sales and customer service (Palmer and Griffith, 1998). Similarly, Web sites have been examined for public relations content (McCarthy, Aronson, and Petrausch, 2004). Fortune 500 site content includes publicity, customer support, and revenue generation (Gardner, 1998). Trading partner content on corporate Web sites supports information exchanges for procurement (Baron, Shaw, and Bailey, 2000) and supply chain management (Lancioni, Smith, and Oliva, 2000). Lancioni, et al. (2000) note that using the Internet for managing supply chains is new and rarely studied, and Baron, et al. (2000) describe the Web's impact on procurement and supplier interaction. These studies categorized Web content related to transactions, but not the site's supplier diversity content.

Wentling and Palma-Rivas (2000) found minority supplier usage to be a component of diversity evaluation among Fortune 500 diversity managers, but the study did not examine the respondent's Web sites. *Purchasing* (Anonymous, 1998) identified supplier diversity obstacles (e.g., lack of management support) and implementation problems (e.g., loss of momentum), but did not mention Web sites. One study identified supplier certification and second-tier programs within the supplier content of Fortune Web sites (Young, 2001). Fine (1996) discussed multicultural organizations, but did not examine supply chain and trading partner issues. In an extensive study of EDI relationships between buyer (i.e., hub or initiator) and seller firms, Angeles and Nath (2003) identified a number of factors critical to successful electronic trading partner relationships, but their study did not ask firms specifically about their relationships with minority suppliers. The five studies just cited demonstrate that prior research has rarely linked supplier diversity with the Web, and the link has received scant mention in workplace diversity studies.

Supplier Diversity Program Content

Studies have examined corporate supplier diversity programs, which predate the Web for supplier communications. Off-line MWBE programs include monitoring applicants, purchasing procedures, bidding assistance, trade fairs, an MWBE database, buyer training, and performance metrics (Dollinger, Enz, and Daily, 1991). Attributes of a "good" MWBE program are: a written MWBE policy, senior management support, inclusion procedures, program goals, certification, an MWBE database, dedicated staff, second-tier programs, performance measures and monitoring, recognition programs, and benchmarking (Morgan, 2002). MWBE program success factors are top management support, buyer training, program goals, and a full-time MWBE coordinator (Carter, Auskalnis, and Ketchum, 1999). A supplier database, CEO involvement, and program success goals are important MWBE practices (Weaver, Stovell, and Romney, 2003). CEO involvement, a database of suppliers, measures for program success, written diversity policies, and certification requirements are key practices of successful diverse corporate purchasing efforts (div2000.com). Second-tier programs are important to MWBEs as contract bundling reduces the number of bid opportunities (Weaver, Stovell, and Romney, 2003). Supplier development is an element of MWBE programs (Krause, Ragatz, and Hughley, 1999). MWBEs must provide products and services that are competitive with non-MWBE firms because buying firms do not accept lower quality, late delivery, or higher prices from MWBEs (Carter, Auskalnis, and Ketchum, 1999). The studies just cited list business and social reasons for creating supplier diversity programs. Prior studies have not analyzed the relative importance of MWBE program attributes or identified the ones most frequently used.

The overlap in findings from non-Web MWBE studies provides a list of supplier diversity program attributes. That list is a basis for comparison with Web-based MWBE content. MWBE program attributes (the variable names are in parentheses) include:

- Applicant screening (Certification)
- Requirements - - price, quality, delivery, financial information (Requirements)
- Diversity purchasing procedures and training, written policies (Procedures)
- Assistance with internal bidding processes; supplier development (Mentoring)
- Participation in diversity trade fairs or minority open houses (Outreach)
- Maintaining a database of approved MWBE suppliers (MWBE Database)
- Measuring MWBE program success, stated program goals (Metrics)
- Top-management involvement and support (CEO Support)
- Personnel dedicated to diversity issues, MWBE coordinator (MWBE Personnel)
- Second-tier MWBE efforts (Second Tier)
- Benchmarking against other MWBE programs (Benchmarking)
- Awards and recognition of MWBE suppliers (MWBE Awards)

Research Questions

By using this research-based list of minority supplier program variables, this present study being reported here can address Web-based supplier diversity by asking:

- What is the supplier diversity content on Fortune 500 public Web sites?

- What reasons are given by firms for their involvement in supplier diversity? and
- How does Web-based MWBE content compare to off-line program content?

THE STUDY

The researcher visited the public Web site of every Fortune 500 firm. The Fortune 500 were used because of their resources, the likelihood of having both a public site and an off-line minority supplier program, and the assumption these firms would mention supplier diversity with Web-based supplier communications. Organizational size is positively related to innovativeness (i.e., the willingness of a firm to try new things), and is often a surrogate measure for total resources in the firm (Rogers, 1995). Rogers' diffusion of innovation theory has been frequently and successfully used over the past forty years to support various research studies in both IT and other disciplines (Young and Benamati, 2004). Variables identified in innovation diffusion theory are factors that affect the adoption of electronic commerce applications (Adekoya, Quayle, and Eyob, 2002).

A form was developed to inventory site content relating to supplier diversity. The content of the form was influenced by prior supply chain and supplier diversity studies; it was tested on 50 Fortune 500 sites. The researcher read the home page and site index, and used the site search where available (for key terms: supplier, diversity, minority, women-owned, and procurement), to identify minority supplier items. All pages relating to suppliers were printed for analysis.

The printed pages were content analyzed by identifying and cataloging supplier diversity content. Data collection and analysis follows the widely respected methodology of Strauss (1987) for examining textual data and surfacing core categories. Strauss' methodology continues to be of value to contemporary researchers, including recent studies of information systems (D'Adderio, 2003; Marginson, 2002). The 2000 Fortune 500 list was used for the data collection.

FINDINGS

Although firms interact with suppliers electronically, the number using a public Web site for minority supplier communication is low; only 62 (12.5%) sites contain MWBE content.

Supplier Diversity Content

The second column of Table 1 lists thirteen categories of MWBE content this study identified on the 62 Fortune 500 Web sites with supplier diversity content. A chi-square test was used to determine if the probability distribution is normal for the count of the number of sites appearing in each of these thirteen categories (Neter, et al., 1988). The null hypothesis is that there are an equal or near number of observations in each of the thirteen categories of MWBE content. A single-sample chi-square (goodness of fit) test is appropriate for nominal-level data (i.e., simple counts of the number of values in two or more categories) as reported in Table 1 (Huck et al., 1974). The count or number of observed values in each of the thirteen content categories (i.e., the rows) was not what would be expected given a normal distribution of those values because the calculated chi-square value is greater than the critical/table value ($p < .001$). Thus the null hypothesis is rejected and we can make inferences about the relative frequencies across the categories.

Given that the counts within the content categories are not normally distributed, the thirteen categories listed in Table 1 - - in order by most frequently appearing content category - - suggest the relative importance of each category to these 62 Fortune 500 firms. (A Chi-square test comparing the number of sites in each category to a normal distribution was significant, $p < .001$. The computed chi-square value was 73.52; table value at .001 level, 12 degrees of freedom = 32.91.) Thus, supplier certification and gathering financial data from prospective trading partners are more important to these Fortune 500 firms than are Web-based descriptions of their second-tier and mentoring programs, because certification and financials are mentioned on a larger number of Web sites.

MWBE contact information appears most frequently, listed on 60 of the 62 sites. Sites define MWBE and provide links to certifying agencies. Financial requirements include accounting statements. Operational requirements include mainframe access, EDI, UPC and bar coding, labor law compliance, ISO certification, geographic coverage,

quality, price, service, on-time delivery, and cycle time improvement. To be considered as a supplier MWBEs must be technically sophisticated, and price and quality competitive.

Table 1: Supplier Diversity Content on Fortune 500 Public Web Sites (N = 62).

MWBE Program Attributes (<i>non-Web</i>)	MWBE Web Content: <u>Minority & Women-owned Business Enterprise</u>	# & % of Sites	
MWBE Personnel	Contact info: name, phone, e-mail	60	96.8
Certification	3 rd party certification required	50	80.6
Procedures	Web application form, or print/mail	40	64.5
	Reasons for MWBE involvement	39	62.9
Requirements	Financial requirements (e.g., sales data)	34	54.8
	Definitions for MWBE categories	33	53.2
Metrics	Metrics to monitor the MWBE program	32	51.6
Requirements	Operational requirements (e.g., EDI)	26	41.9
	Hyperlinks to MWBE certifying agencies	22	35.5
CEO Support	Diversity letter from officer	21	33.9
MWBE Awards	MWBE awards, success stories	18	29.0
Second Tier	Second-tier MWBE program	16	25.8
Mentoring	Mentoring MWBE suppliers	13	21.0

The firms publicize tracking metrics of MWBE program success, including the:

- percentage increase in the total number of minority suppliers in a given time period,
- specific number of firms in the MWBE program database,
- dollars spent or the percentage of total procurement given to MWBEs annually, and
- stated corporate annual goal, as dollars or a percentage, for MWBE spending.

The sites list program start date, MWBE contribution to cost reductions, and contract amounts requiring small business solicitation by their prime suppliers. They mention "small business of the year" or "best MWBE" award, and MWBE awards received or case studies of successful MWBEs from whom they purchase.

Diversity letters from the chairman/CEO discuss partnerships with suppliers using the words "alliances" and "collaboration," equal or fair business opportunities, reasons for MWBE programs, and how supplier diversity helps accomplish corporate objectives. They stress ethical conduct for suppliers and note the importance of price and quality. The letters express commitment from the top for MWBE programs and note issues that are important to the buying firm.

Second-tier programs promote MWBE business development. Firms encourage or require primary suppliers to include MWBEs as second-tier suppliers, have subcontracting programs to link MWBEs with primary suppliers, and require reporting of second-tier efforts. Firms provide technical assistance and mentor small businesses regarding procurement procedures, business practices, and quality requirements. Firms with a large volume of sales to the federal government are required to buy at least 5% of their supplies from minority-owned firms (Armstrong, 2004).

Processes after certification include evaluating the application and determining a need for the products or services of the MWBE. Approved MWBEs are responsible for pursuing a business relationship. They must: follow-up with the director of minority business to develop personal contacts, be persistent, check with procurement for bid opportunities, and differentiate themselves by translating their capabilities into buyer needs. These procedures tell MWBEs they are entering a lengthy process, not simply going through the formality of a Web questionnaire that guarantees business.

Justification for MWBE Programs

Firms explain their involvement in supplier diversity, citing reasons that fall into the following four categories (some cite reasons across several different categories):

- **Customers** (16 firms) - MWBEs are potential customers; supplier diversity enables the firm to be a more compelling place to shop and invest; diverse suppliers help the firm understand and attract diverse customers.
- **Competitive Advantage** (11) – MWBE programs provide strategic advantage, make good business sense, are required for government contractors, support continuous improvement, and give evidence of a high-performance, value-driven culture.
- **Communities** (19) – Supplier diversity programs are a way to invest in and help grow the communities served or operating in; they aid community growth.
- **Common Good** (7) – Supplier diversity expresses concern for the public good; it's the right thing to do; a healthy society enables all to share in economic growth.

Comparing Web-based and Non-Web MWBE Items

The first column of Table 1 lists the variables from non-Web MWBE programs identified in prior research. Nine of the twelve (75%) off-line MWBE variables appear on the Web sites; the three variables that did not appear were: "MWBE database," "Benchmarking," and "Outreach."

Three items appear on the Web sites but are not listed as key variables in non-Web MWBE program studies. The Web sites often provide detailed justifications for the firm's involvement in supplier diversity ("Reasons for MWBE involvement," Table 1, Column 2). The Web sites give definitions for MWBE categories (e.g., black, Hispanic), and they provide hyperlinks to MWBE certifying agencies. When comparing the list of the off-line program variables and the list of Web-based MWBE content items, the same nine items appear on both lists. Subtracting the Web-specific item "hyperlinks" creates two lists of 12 items each with nine common items, or an overlap of 75% of the items between the two lists.

DISCUSSION

Minority supplier communications from public Web sites are not widespread - - only one out of eight mentions supplier diversity. These sites are emerging as an outlet for communicating with MWBEs. The Web could significantly improve communications with MWBEs because it avoids costly EDI or proprietary linkages. Corporate public Web sites could facilitate MWBE recruitment due to MWBE use of the Web. Obviously, information systems personnel will be instrumental in carrying out these content additions to corporate Web sites. Firms with off-line supplier diversity programs should consider the Web as a component of those programs.

A pessimistic view of Web-based supplier diversity is that it implies special treatment for MWBEs. However, this study finds that a number of firms with MWBE content have requirements such as price, quality, geographic coverage, and financials, which argue against special treatment. Over half of the firms with MWBE content request financials, and other statements about expectations concerning price and quality on these sites show that prospective MWBEs must compete against large suppliers that have previously established relationships with the buying firms, as well as the technical expertise and resources required for participating in e-procurement. Web-based supplier diversity initiatives place the responsibility on the MWBE for certification, follow-up contacts, and meeting requirements for electronic linkages and financial stability. Firms that purchase from MWBEs do not relax established purchasing practices - - such as expectations regarding price, quality, level of service and delivery - - to support their MWBE program (Carter, Asaklanis, and Ketchum, 1999).

The stated purposes for creating supplier diversity programs, such as gaining new customers, also argue against altruistic motives. The diversity statements of these firms describe diversity more broadly than gender or race. Firms see sound business reasons for developing a diverse supplier base (e.g., better understanding customer's needs). Supplier diversity is one way firms understand and sell to a very diverse set of customers in an increasingly

diverse marketplace; the firms combine this learning about diverse customers with performance demands that are equally applied to all suppliers.

MWBE content enables firms to publish diversity information and screen applicants by providing electronic application forms. E-forms and certification appear frequently as supplier diversity content. This study finds that firms with Web-based MWBE content are in the publishing stage - - the sites are simply used to publicize the firm's MWBE activities. This study also finds some consensus regarding supplier diversity content, but a lower-level of interest in using transactional features (e.g., just over a third have hyperlinks to the certifying agencies) for screening prospective diverse suppliers. Certification indicates concern for regulatory compliance and equal treatment for applicants, who cannot begin selling without certification from a third party.

Program Content Agreement

This study generated two lists: a list of minority supplier program variables from prior academic research, and a list - - from Web site visits - - of Web-based supplier diversity content. The study finds a moderate degree of agreement (75%) between those two lists, suggesting that Web-based supplier diversity content generally mirrors the key aspects of existing, off-line programs.

The sites did not list their supplier databases, perhaps for privacy and competitive reasons. Although maintaining a diverse supplier database for buyer reference is a key aspect of off-line programs, there is no reason for corporations to share this list over a public Web site. However, both the NMSDC and the WBENC have rigorous certification procedures and both offer a national database of certified minority or women-owned firms.

There was no specific Web content related to benchmarking or outreach. Benchmarking tends to be a complex internal comparison (e.g., with another division of the same firm) that is less easily reported than the metrics more often appearing on these sites, such as the dollars spent or the percentage of total procurement given to MWBEs annually. The supplier area of the Web site is itself a form of outreach to the minority supplier audience; other diversity outreach activities can be reported in different segments of the Web site, such as Web-based press releases.

Previous, non-Web MWBE academic studies (e.g., Krause, Ragatz, and Hughley, 1999) discuss, often in the "Introduction" to the paper, reasons why firms are involved in supplier diversity. However, the stated reasons for involvement are never part of the key factors or variables included with supplier diversity programs. "Reasons for involvement" are a prerequisite or argument for developing a MWBE program. Web-based supplier diversity content provides a similar list to justify the firm's involvement with minority suppliers. Corporate Web sites are a convenient place to publish this type of program justification.

Similarly, corporate public Web sites are a logical place to publish the Web addresses of certifying agencies such as the National Minority Supplier Development Council. The sites facilitate the process of certification by the prospective supplier. "Certification" is a key off-line variable, and also appears on over 80% of the Web sites. Interestingly, although many firms mention the necessity of third-party certification, only about 35% of the sites actually provide the necessary Web links to initiate that process, and nearly 20% fail to mention certification at all.

"Definitions for MWBE categories" (e.g., Hispanic, Native American) appear on over half of the sites with MWBE content. Definitions for MWBE categories would never appear as key off-line MWBE program variables, because they are buried under the operational procedures or prerequisites for becoming a minority supplier. These definitions are associated with certification; if the prospective supplier does not fit into one of the defined categories they are not going to be certified as a minority supplier.

MWBE Best Practices

These sites represent, arguably, the best practices for Web-based supplier diversity efforts. Key elements of a Web-based MWBE program are:

- **evidence of commitment** - through a letter from a top officer, MWBE recruiting activities, second-tier requirements, and minority supplier development or small business mentoring programs,
- **description of expectations** - regarding product or service prices, on-time delivery, quality, financial stability, and technological capabilities,
- **process assistance** - such as directions about certification, electronic forms, names and e-mail contact information, product or service lists and selling opportunities,
- **success measures** - including case studies of existing MWBEs, and formal metrics for charting the growth in MWBE activity, and
- **user friendliness** - the MWBE materials are easy to find on the site, and the tone of the material encourages prospective MWBEs to apply. Tone can be set with statements such as "we actively look for and help develop a diverse supplier base."

Several key, Web-based MWBE content items emerge from this study (Table 1). Firms developing Web-based links to prospective MWBEs should consider these content areas: commitment, expectations, process, measures, and tone. This study's best practices parallel those cited earlier for non-Web MWBE programs from the Women's Business Enterprise National Council (div2000.com).

CONTRIBUTION OF THIS STUDY

This study examines Web-based supplier diversity initiatives on Fortune 500 Web sites. It categorizes that content and compares it to non-Web MWBE programs. One contribution of the study is to research practice. The study applies a well-established methodology to a relatively new area of investigation. The literature review shows that very few studies to date have investigated the diversity aspects of the Web. This exploratory study could initiate a stream of research related to supplier-diversity and trading partner interactions across the Web because it suggests several other associated studies. It would be interesting to know, for example, the factors that influence firms to place MWBE content on their Web site. How effective has Web-based MWBE content been in attracting diverse supplier prospects? How well integrated into the process are these Web-based MWBE initiatives in corporate supplier diversity programs? How important are Web-based MWBE efforts when compared to other aspects of supplier diversity programs? Gaining access to diverse suppliers, and getting their views on the role of the Web in their efforts to expand their customer base, is another interesting question. This study has examined a single aspect of the relationship - - diverse supplier to buyer. Is it possible that buying firms use diverse supplier Web sites as a way to identify MWBE prospects? These are all compelling questions that are outside the scope of this present study.

A second contribution of the study is for practitioners. The study notes the business implications of supplier diversity and examines current Web-based MWBE programs. Managers who are involved with various aspects of supply chain management (e.g., professional purchasers) can use these findings as a benchmark for their existing Web-based supplier diversity efforts, by comparing their site's MWBE content to the Web-based content of other firms. Firms that have not moved diverse supplier communications to the Web should consider such an addition to their corporate Web site, because of the importance of diversity issues and diverse populations. The study is of significant value to information systems personnel who development the Web-based systems that support interactions with these diverse suppliers. For example, a developer should recognize the most critical content for a Web-based supplier diversity initiative to gain the greatest value from the firm's Web site; that content is identified in this study. Diversity has value in itself, but the competitive and economic implications of diversity within the supply chain mean that managers who interact with external constituencies such as suppliers and customers must be aware of the issues explored in this study.

LIMITATIONS

This study's findings are somewhat limited because Fortune 500 public Web sites do not perfectly represent every corporate site. Although the data collection was exhaustive across an influential group of 500 large firms, and the findings were compared, where possible, with related academic studies, the conclusions are based on content from 62 Web sites. This is a point-in-time "snapshot" of Web-based content that can change. The study examines "what is" questions, but immediately raises other important questions about the effectiveness and influence of these Web-based initiatives. Firms with well-established supplier diversity programs may elect not to

use the Web for publishing their programs. However, the sites examined in this study do reflect how major corporations, which have considerable purchasing power and channel influence, are using their public Web sites as an outlet to support supplier diversity initiatives.

CONCLUSION

Large firm, public Web sites are generally underused for supplier diversity communication. Given the growing access to the Web, and its inherent value in terms of both costs and speed in linking to small and mid-sized trading partners, organizations with established supplier diversity programs should strongly consider the Web as one more outlet for promoting these efforts.

REFERENCES

- Adekoya, A., A. Quaye, and E. Eyob (2002). "A Multivariate Probit Analysis of Selected Factors Influencing Electronic Commerce Adoption in Organizations." *Journal of International Technology and Information Management* 11, (2), 127-140.
- Angeles, R. and R. Nath (2003). "Electronic supply chain partnerships: Reconsidering relationship attributes in customer-supplier dyads." *Information Resources Management Journal*, 16 (3), 59-84.
- Armstrong, J. (2004). "Buying from minorities is good business, panel says." *Automotive News* 78 (6084), March, 32.
- Anonymous (1998). "Obstacles on the road to supplier diversity." *Purchasing* 125 (2), 14-19.
- Baron, J., M. Shaw, and A. Bailey (2000). "Web-based E-catalog Systems in B2B Procurement." *Communications of the ACM* 43 (5), 93-100.
- Berkowitz, D. (2003). "Worldwide B2B E-Commerce to Surpass \$1 Trillion By Year's End." eMarketer.com, March 19.
- Carter, C., R. Auskalnis, and C. Ketchum (1999). "Purchasing from Minority Business Enterprises: Key Success Factors." *J. of Supply Chain Management* 35 (1), 28 – 32.
- Crockett, R. (2002). "Going to the Source, on the Web." *Business Week Online*, May 13.
- Cucchiella, F., L. Fratoocchi, P. Pelagagge, and F. Scacchia (2002). "Analysis of Factors Affecting E-supply Chain Performances." *Journal of International Technology and Information Management* 11, (2), 51-62.
- D'Adderio, L. (2003). "Configuring software, reconfiguring memories: The influence of integrated systems on the reproduction of knowledge and routines." *Industrial and Corporate Change* 12 (2), 321-350.
- Daniels, C. (2004). "Minority Rule." *Fortune Small Business* 13 (10), 65-66.
- Davis, B. (2004). "Virginia Minority Supplier Development Council's Director Embraces Change." *Knight Ridder Tribune Business News*, January 17, 1.
- Div2000.com (2001). "New Survey Provides Roadmap for Success for U.S. Corporations Seeking Supplier Diversity." <http://www.div2000.com/news/December2001/WBENCSurvey.html>.
- Dollinger, M., C.ENZ, and C. Daily (1991). "Purchasing from Minority Small Businesses." *Journal of Purchasing and Materials Management* 27 (2), 9-14.
- Evans, M. (2004). "The Diversity Imperative." *Chief Executive* (196), March, 18.

- Fields, J. (2001). "Uncle Sam Gives Women the Cold Shoulder." *Business Week*, February 21.
- Fine, M. (1996). "Cultural diversity in the workplace: The state of the field." *The Journal of Business Communication* 33 (4).
- Gardner, E. (1998). "More Work –More Money." *Internet World*, October 5.
- Hernandez, R. (2002). The Supplier Diversity Digital Divide." e-MBE.net, <http://www.e-mbe.net/tutorials/supdivdigdivide.htm>.
- Huck, S., W. Cormier, and W. Bounds (1974). *Reading Statistics and Research*, Harper and Row, New York.
- Koh, C. and H. Chong (2002). "Does the Internet improve business? An empirical inquiry into the perceived strategic value and contribution of the Internet." *Journal of International Technology and Information Management* 11, (1), 81-98.
- Krause, D., G. Ragatz, and S. Hughley (1999). "Supplier Development from the Minority Supplier's Perspective." *Journal of Supply Chain Management* 35 (4), 33 – 41.
- Lancioni, R., M. Smith, and T. Oliva (2000). "The Role of the Internet in Supply Chain Management." *Industrial Marketing Management* 29, 45-56.
- Liu, C., Arnett, K., Capella, L., and Beatty, R. (1997). "Web Sites of the Fortune 500 Companies: Facing Customers Through Home Pages." *Information and Management* 31, 335-345.
- Lo, M. and C. Hsieh (2003). "Mining the FX electronic inter-dealer market." *Journal of International Technology and Information Management* 12, (1), 61-76.
- Marginson, D. (2002). "Management control systems and their effects on strategy formation at middle-management levels: Evidence from a U.K. organization. *Strategic Management Journal* 23 (11), 1019-1031
- McCarthy, R., J. Aronson, and R. Petrausch (2004). "Building Relationships that Last: Integrating Public Relations Into Web Design." *Journal of International Technology and Information Management* 13, (1), 1-12.
- MBDA (2001). "The State of Minority Business." U.S. Department of Commerce, Minority Business Development Agency.
- META Group (2000). "Study Finds Most Major Firms Are Missing the Mark on E-Business." press release, February 9.
- Milken Institute (2000). "The Minority Business Challenge: Democratizing Capital for Emerging Domestic Markets." September 25.
- Morgan, J. (2002). "How well are supplier diversity programs doing?" *Purchasing* 131 (13).
- Neter, J., W. Wasserman, and G. Whitmore (1988). *Applied Statistics* (3rd Edition), Allyn and Bacon, Boston.
- Palmer, J. and Griffith D. (1998). "An Emerging Model of Web Site Design for Marketing." *Communications of the ACM* 41 (3), 44-51.
- Procurementresources.com. (2003). "About Minority Purchasing." www.procurementresources.com.
- Reese, A. (2001). "Supplier Diversity and e-Procurement: Why Your Initiatives Are Not At Odds." Sourceonline.com.
- Rogers, E. (1995). *Diffusion of Innovations*. (4th Edition). New York: Free Press.

- Strauss, A. (1987). *Qualitative Analysis for Social Scientists*. Cambridge University Press.
- Thompson, C. (2000). "Americans Online, Part 2: Race." *eMarketer.com*, May 28.
- Thompson, C. (2000). "Americans Online, Part 3: Gender." *eMarketer.com*, June 7.
- Weaver, J., D. Stovell, and L. Romney (2003). "Access to Markets: Perspectives from Large Corporations and Women's Business Enterprises." Center for Women's Business Research, <http://www.nfwbo.org/Research>
- Wentling, R. and N. Palma-Rivas (2000). "Current status of diversity initiatives in selected multinational corporations." *Human Resource Development Quarterly* 11 (1), 35-60.
- Young, D. (2001). "Public Web Sites as a Component of Corporate Supplier Communication." *Information Strategy: The Executives Journal* 17 (3), 18-28, Spring.
- Young, D. and J. Benamati (2004). "A Cross-industry Analysis of Large Firm Transactional Public Web Sites." *Mid-American Journal of Business* 19 (1), 37-46.
- Young, D. and J. Benamati (2000). "Differences in Public Web Sites: The Current State of Large U.S. Firms." *Journal of Electronic Commerce Research* 1 (3), August.

